WHAT IS CLAIMED IS:

1. An extraction device for extracting an analyte from living tissue through skin, the device comprising:

a first electrode part having a contact area with the skin of less than about 50 mm^2;

a through-current electrode part; and

a power supply part for supplying electrical energy to the first electrode part and the through-current electrode part, and for extracting an analyte in the first electrode part.

2. The device of Claim 1, wherein the contact area is between about 0.01 and about 25 mm^2.

3. The device of Claim 1, wherein the power supply part supplies a current which flows from the power supply part through the through-current electrode part, the skin, the tissue, and the first electrode part, and returns to the power supply part.

4. The device of Claim 1, wherein the power supply part supplies a current of less than about 300 μA.

5. The device of Claim 1, wherein the first electrode part comprises a first electrode connected to the power supply part, and a first collection material for collecting an analyte extracted by the first electrode, wherein the first collection material contacts the first electrode.

6. The device of Claim 5, wherein a contact area of the first electrode part and the skin is a contact area of the first collection material and the skin.

7. The device of Claim 1, wherein the first electrode part is detachable from the power supply part.

8. The device of Claim 1, further comprising:

a second electrode part having a contact area with the skin of less than about 50 mm^2;

wherein the power supply part comprises:

a first power supply for supplying electrical energy to the first electrode part and the through-current electrode part, and for extracting an analyte at the first electrode part; and

a second power supply for supplying electrical energy to the second electrode part and the through-current electrode part, and for extracting an analyte at the second electrode part.

9. The device of Claim 8, wherein the contact area of the second electrode part and the skin is between about 0.01 and about 25 mm^2.

10. The device of Claim 8, wherein the second electrode part comprises a second electrode connected to the power supply part, and a second collection material for collecting an analyte extracted by the second electrode, wherein the second collection material contacts the second electrode.

11. The device of Claim 8, wherein the first electrode part and the second electrode part are integrated.

12. The device of Claim 1, wherein the power supply part comprises a constant-current power supply.

13. The device of Claim 1, wherein the power supply part

comprises a constant-voltage power supply.

14. The device of Claim 1, wherein the power supply part outputs a voltage of less than about 10 V.

15. The device of Claim 1, further comprising an extraction accelerator part for promoting the extraction of the analyte.

16. The device of Claim 15, wherein the extraction accelerator part comprises an ultrasonic irradiation part for irradiating the skin with ultrasonic waves.

17. The device of Claim 1, wherein the analyte is glucose.

18. An analyzer for analyzing an analyte extracted through skin, the analyzer comprising:

the extraction device of Claim 1;

an assay part for assaying the analyte extracted in the first electrode part, and for outputting a signal corresponding to an amount of the analyte;

an analysis part for analyzing the signal output by the assay part to obtain an analysis result; and

an output part for outputting the analysis result obtained by the analysis part.

19. An extraction device for extracting an analyte in living tissue through skin, the device comprising:

a first path-forming electrode part having a contact area with the skin of less than about 50 mm^2;

a first extraction electrode part for extracting an analyte;

a through-current electrode part; and

a power supply part for supplying electrical energy to the first path-forming electrode part, the first extraction electrode part, and the through-current electrode part, for forming analyte transmission paths in the skin for the passage of the analyte, and for extracting the analyte at the first extraction electrode part.

20. The device of Claim 19, wherein the contact area is between about 0.01 and about 25 mm^2.

21. The device of Claim 19, wherein the first path-forming electrode part is connected to the power supply part during formation of the analyte transmission paths, and during analyte extraction, wherein the first path-forming electrode part is disconnected from the power supply part, and wherein the first extraction electrode part is connected to the power supply part.

22. The device of Claim 19 further comprising:

a second path-forming electrode part having a contact area with the skin of less than about 50 mm^2; and

a second extraction electrode part for extracting an analyte;

wherein the power supply part comprises:

a first power supply for supplying electrical energy to the first path-forming electrode part, the first extraction electrode part, and the through-current electrode part, for forming analyte transmission paths in the skin, and for extracting analyte at the first extraction electrode part; and

a second power supply for supplying electrical energy to the second path-forming electrode part, the second extraction electrode part, and the through-

current electrode part, for forming analyte transmission paths in the skin, and for extracting analyte at the second extraction electrode part.

23. The device of Claim 22, wherein the second path-forming electrode part is connected to the power supply part during formation of the analyte transmission paths, and during analyte extraction, wherein the second path-forming electrode part is disconnected from the power supply part, and wherein the second extraction electrode part is connected to the power supply part.

24. An extraction method for extracting an analyte in living tissue through skin, the method comprising:

placing on the skin a through-current electrode part, and a first electrode part having a contact area with the skin of less than about 50 mm^2;

supplying electrical energy to the through-current electrode part and the first electrode part; and

extracting analyte at the first electrode part.

25. The method of Claim 24, wherein the contact area is between about 0.01 and about 25 mm^2.

26. The method of Claim 24, further comprising:

placing on the skin a second electrode part having a contact area with the skin of less than about 50 mm^2;

supplying electrical energy to the through-current electrode part and the second electrode part; and

extracting analyte at the second electrode part.

27. The method of Claim 26, wherein the placing of the first extraction electrode part on the skin, and the placing

of the second extraction electrode part on the skin are executed substantially simultaneously.

28. An analysis method for analyzing an analyte extracted through skin, the method comprising:

extracting an analyte by the method of claim 24;

outputting a signal corresponding to an amount of extracted analyte;

analyzing the signal to obtain an analysis result; and

outputting the analysis result.

29. A method for extracting an analyte in living tissue through skin, the method comprising:

forming analyte transmission paths in the skin for the passage of analyte;

placing a through-current electrode part on the skin;

placing a first extraction electrode part on the skin in which the analyte transmission paths are formed;

supplying electrical energy to the through-current electrode part and the first extraction electrode part; and

extracting analyte at the first extraction electrode part.

30. The method of Claim 29, wherein the forming of the analyte transmission paths in the skin comprises:

placing on the skin a first path-forming electrode part having a contact area with the skin of about 50 mm^2;

supplying electrical energy to the first path-forming electrode part; and

removing the first path-forming electrode part from the skin.

31. The method of Claim 30, wherein the contact area is

between about 0.01 and about 25 mm^2.

32. The method of Claim 29, further comprising:

placing a second extraction electrode part on the skin in which the analyte transmission paths are formed;

supplying electrical energy to the through-current electrode part and the second extraction electrode part; and

extracting analyte at the second extraction electrode part.

33. The method of Claim 30 further comprising:

placing on the skin a second path-forming electrode part having a contact area with the skin of less than about 50 mm^2;

supplying electrical energy to the second path-forming electrode part;

removing the second path-forming electrode part from the skin;

placing a second extraction electrode part on the skin in which the analyte transmission paths are formed;

supplying electrical energy to the through-current electrode part and the second extraction electrode part; and

extracting analyte at the second extraction electrode part.

34. The method of Claim 32, wherein the placing of the first extraction electrode part on the skin, and the placing of the second extraction electrode part on the skin are executed substantially simultaneously.

35. An analysis method for analyzing an analyte extracted through skin, the method comprising:

extracting an analyte by the method of Claim 29;

outputting a signal corresponding to an amount of extracted analyte;

analyzing the signal to obtain an analysis result; and

outputting the analysis result.